

# Woodworking – Spraying paints and lacquers containing isocyanates

## What is the problem?

Spraying furniture with two-pack polyurethane paints and lacquers containing isocyanates (eg polyisocyanates) presents a risk to health.

## What are the risks?

Spraying generates a mist that may be inhaled and cause respiratory sensitisation and occupational asthma.

Exposure to trace amounts of isocyanates can then trigger these symptoms once a person is sensitised, which means the person can no longer work with isocyanates.

Organic solvents and thinners used to clean spray guns can also affect the central nervous system and various organs and can cause dermatitis.

## What is a solution to the problem?

The risk can be eliminated or reduced by:

- referring to the material safety data sheets (MSDS) for guidance on suitable controls
- using paints and lacquers that do not contain isocyanates
- using downdraft or side-draft spray booths (with air velocities of 0.25m/s and 0.5m/s respectively) that vent safely outside
- locating open faced spray booths away from cross drafts
- using an airless or high volume low pressure (HVLP) spray technique to minimise overspray
- using an airline respirator when spraying two-pack isocyanate-containing paints or lacquers (even when spraying in a booth)

- placing items to be sprayed well within an open faced booth and installing a turntable to allow the operator to rotate the items and direct the spray towards the extraction point
- keeping freshly sprayed items in the booth at least until touch dry to minimise solvent exposure
- maintaining (eg replacing filters) and checking spray booth, respirators and airline air quality
- eliminating/controlling ignition sources in areas where flammable solvents are used or stored and within two metres of open faced booth openings
- properly storing hazardous substances/dangerous goods (ie using flammable liquids storage cabinets for small quantities or a designated storage room with adequate ventilation, intrinsically safe lighting and bunding)
- washing up spray gun within spray booth or a workstation fitted with local exhaust ventilation (LEV) or using a respirator fitted with an organic vapour cartridge if LEV has not been installed
- using suitable gloves when cleaning spray gun with solvents such as gunwash (see MSDS)
- placing lids on open containers of paint, solvents, thinners or solvent soaked rags to prevent unnecessary exposure to solvent vapours
- providing health surveillance (lung function tests) if spraying isocyanates.

## Further Information

### WorkSafe Advisory Service

Toll-free: 1800 136 089

Email: [info@worksafe.vic.gov.au](mailto:info@worksafe.vic.gov.au)

[worksafe.vic.gov.au](http://worksafe.vic.gov.au)